

Notice of Allowability

Application No.

10/036,018

Examiner

Mr. Terry K. Cecil

Applicant(s)

DEARING ET AL.

Art Unit

1723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the IDS of 3-1-2002 and the telephonic interview of 9-5-2003.
2. ☒ The allowed claim(s) is/are 1-11, 13-15 and 17-20 renumbered upon allowance as claims 1-18.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
(a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☒ CORRECTED DRAWINGS must be submitted.
(a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☒ hereto or 2) ☐ to Paper No. _____.
(b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the Examiner.
(c) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- 1 ☒ Notice of References Cited (PTO-892)
3 ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
5 ☒ Information Disclosure Statements (PTO-1449), Paper No. 0302.
7 ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 2 ☐ Notice of Informal Patent Application (PTO-152)
4 ☒ Interview Summary (PTO-413), Paper No. 0903.
6 ☒ Examiner's Amendment/Comment
8 ☒ Examiner's Statement of Reasons for Allowance
9 ☐ Other

Mr. Terry K. Cecil
Examiner
Art Unit: 1723

Art Unit: 1723

Note: Claims 1-11, 13-15 and 17-20 are allowed and have been respectively renumbered upon allowance as claims 1-18.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37

CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this examiner's amendment was given in a telephone interview with Turner Moller, Jr. on 9-5-2003.

2. The application has been amended as follows:

- Claims 12 and 16 have been canceled.
- Claim 1 has been amended as follows:

1. (Amended) A blender for preparing a treatment liquid, comprising

a chassis providing a generally horizontal platform;

a manifold having a length of tubing supported by the chassis, the tubing having an upright generally planar side wall and a multiplicity of inlet connections opening through the upright side wall, the upright wall including an upper edge and a lower edge, the upper edge being outboard of the lower edge so the upright wall defines an angle, with a line perpendicular to the horizontal platform, in the range of 3-20°; and

a fluid path including the manifold providing a mechanism for adding another material to the fluid path.

Art Unit: 1723

- Claim 11 has been amended as follows:

11. (Amended) The blender of claim 1 wherein the chassis provides a direction of travel, the first mentioned length of tubing is rectangular in cross-section and extends along the direction of travel along one side of the chassis and the manifold comprises a second length of rectangular tubing extending in the direction of travel along a second side of the chassis, the second rectangular tubing having an upright generally planar side wall facing away from the chassis and a multiplicity of inlet connections opening through the upright side wall and further comprising a conduit connecting the rectangular tubing lengths of the manifold.

- Claim 13 has been amended as follows:

13. (Amended) The blender of claim ~~12~~ 1 wherein the angle is 5-10°.

- Claim 14 has been amended as follows on the next page:

Art Unit: 1723

14. (Amended) A blender for preparing a treatment liquid, comprising

a wheeled chassis having a direction of travel and providing a generally horizontal platform:

a suction manifold having a length of rectangular tubing extending in the direction of travel along a side of the chassis, the tubing having an upright generally planar side wall facing away from the chassis and a multiplicity of inlet connections opening through the upright side wall; the upright wall including an upper edge and a lower edge, the upper edge being outboard of the lower edge so the upright wall defines an angle, with a line perpendicular to the horizontal platform, in the range of 3-20°;

a discharge manifold having a length of tubing extending in the direction of travel along a side of the chassis providing a multiplicity of outlet connections; and

a fluid path connecting the inlet and outlet manifolds including an open top hopper for receiving particulate solids and a mechanism for mixing solids from the hopper with liquid from the suction manifold and delivering a slurry to the discharge manifold.

- Claim 17 has been amended as follows:

17. (Amended) The blender of claim ~~16~~ 14 wherein the angle is 5-10°.

- Claims 18-19 have been amended as follows on the next page:

Art Unit: 1723

18. (Amended) The blender of claim 14 wherein the discharge manifold comprises a second length of rectangular tubing extending in the direction of travel along an opposite side of the chassis, the second rectangular tubing having ~~{an}~~ a second upright generally planar side wall facing away from the chassis and a multiplicity of inlet connections opening through the second upright side wall and further comprising a conduit connecting the rectangular tubing lengths of the discharge manifold.

19. (Amended) The blender of claim 18 wherein the second upright ~~{walls}~~ wall of the discharge manifold tubing ~~{lengths include}~~ includes an upper edge and a lower edge, the upper edge being outboard of the lower edge so the upright wall defines an angle, with a line perpendicular to the horizontal platform, ~~{with a vertical}~~ in the range of 3-20°.

- In the specification, page 6, lines 18 and 20, "36", has been replaced with —40—; — and— has been added after "skid mounted".
- In the specification, the paragraph spanning pages 9 and 10 has been replaced with the following:

—As shown best in FIG. 4, the tubular bodies 74, 76 are tilted slightly in an outboard direction, i.e. the upper end of the bodies 74, 76 is slightly outward of the lower end by an angle 96 which is typically 3-20° and preferably about 5-10° from a line perpendicular to the horizontal platform of the chassis. This is done so the hoses (not shown) attached to the couplings 56 are aimed slightly toward the ground. The hoses

Art Unit: 1723

used in frac operations are typically wire reinforced hoses which do not kink readily but tilting the upper end of the bodies 74, 76 reduces the stress applied to the hoses and thereby prolongs their useful life. Often, hoses used in frac operations are replaced when they begin to kink near the connection with the manifolds.—

- The abstract has been amended as follows:

—A blender mixes a liquid and a quantity of particulate solids for use in hydrocarbon well operations. The blender is mounted on a vehicle having a suction manifold of rectangular tubing. The long side of the rectangular tubing is vertical, is positioned on one side of the vehicle and provides a large number of inlet connections which, in use, connect to hoses leading to tanks filled with a frac liquid or the like. The discharge manifold may be a mirror image of the suction manifold. The rectangular suction manifold tubing provides greater spacing between the inlet connections and greater volume throughput in use. Also, the rectangular suction manifold tubing is tilted so that the inlets are angled toward the ground. —

Required Drawing Changes

3. The following changes to the drawings have been approved by the examiner and agreed upon by applicant: in figure 2, —66— on the left side of the page and without having a leader will be removed. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

Reasons for Allowance

4. The following is an examiner's statement of reasons for allowance:
 - The limitations of the Chassis including a horizontal platform and for the manifold upright planar wall (that includes the plurality of inlets) to be at the claimed angle have been added to the independent claims. The closest cited art—Pearson (U.S. 4,901,563)—fails to anticipate or render obvious, alone or in any proper combination, the aforementioned limitations. The added limitations are shown in e.g. fig 2 (in the vicinity of reference no. 86) and figure 4 (see angles 96) of applicant's drawings.
 - The dependent claims were amended to correspond to the aforementioned changes to the independent claims and to correct problems of indefiniteness.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee.

Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Art Unit: 1723

5. Contact Information:


- Examiner Mr. Terry K. Cecil can be reached at (703)305-0079 for any inquiries concerning this communication or earlier communications from the examiner.

Note that the examiner is on the increased flextime schedule but can normally be found in the office during the hours of 8:00a to 4:30p, on at least four days during the week M-F.

- The group receptionist can be reached at (703)308-0661 for inquiries of a general nature or those relating to the status of this or proceeding applications.
- Wanda Walker, the examiner's supervisor, can be reached at (703)308-0457 if attempts to reach the examiner are unsuccessful.
- The Fax number for this art unit for official faxes is 703-872-9306.



Mr. Terry K. Cecil
Examiner
Art Unit 1723



TKC
September 6, 2003